

Application Serial No. 09/762,629
Amendment dated November 23, 2004
Reply to Final Office Action of December 22, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 25-73 (canceled)

Claim 74 (currently amended)

A process for selecting transformed cells or tissue comprising:

- a) transforming plant cells or plant tissue that are sensitive to galactose toxicity with one or more polynucleotide molecule encoding UDP-glucose-dependent uridyl transferase ~~one or more enzyme useful to convert galactose to UDP-glucose;~~
- b) exposing the cells or tissue to galactose, wherein galactose is toxic to non-transformed cells or tissue; and
- c) selecting transformed cells or tissue that are insensitive to galactose toxicity.

Claim 75 (previously presented)

The process of claim 74, further comprising transforming the plant cells or plant tissue with one or more polynucleotide encoding wherein said one or more enzyme is one or more of:

- i) UTP-dependent pyrophosphorylase;
- ii) ~~UDP-glucose-dependent uridyl transferase;~~ and
- ~~iii) ii)~~ galactokinase.

Claim 76 (previously presented)

The process of claim 74, further comprising transforming the plant cells or plant tissue with one or more polynucleotide encoding wherein said one or more enzyme is two or more of:

Application Serial No. 09/762,629
Amendment dated November 23, 2004
Reply to Final Office Action of December 22, 2003

- i.) UTP-dependent pyrophosphorylase;
- ~~ii) UDP-glucose dependent uridyl transferase; and~~
- ~~iii) ii) galactokinase.~~

Claim 77 (cancelled)

~~The process of claim 76, wherein said one or more enzyme is at least three of:~~

- ~~i) UTP-dependent pyrophosphorylase;~~
- ~~ii) UDP-glucose dependent uridyl transferase; and~~
- ~~iii) galactokinase.~~

Claim 78 (previously presented)

The process of claim 74, further comprising transforming the plant cells or plant tissue with one or more polynucleotide encoding ~~wherein said one or more enzyme comprises~~ UTP-dependent pyrophosphorylase.

Claim 79 (cancelled)

~~The process of claim 74, wherein one or more enzyme comprises UDP-glucose dependent uridyl transferase.~~

Claim 80 (cancelled)

~~The process of claim 74, wherein one or more enzyme comprises UTP-dependent pyrophosphorylase and UDP-glucose dependent uridyl transferase.~~

Claim 81 (previously presented)

The process of claim 74, wherein said exposing comprises adding galactose to the cells in culture medium.

Claim 82 (previously presented)

The process of claim 74, wherein said exposing comprises providing galactose-1-phosphate to the cells or tissue.

Application Serial No. 09/762,629
Amendment dated November 23, 2004
Reply to Final Office Action of December 22, 2003

Claim 83 (previously presented)

The process of claim 74, wherein said exposing comprises providing UDP-galactose to the cells or tissue.

Claim 84 (previously presented)

The process of claim 74, wherein said cells or tissue are further exposed to a galactosidase that produces galactose from a galactose precursor.

Claim 85 (previously presented)

The process of claim 74, wherein said cells or tissue are incubated in a culture medium containing one or more galactose precursor selected from: lactose, melibiose, raffinose, stachyose, verbascose, galactinol, galactose pentaacetate and galactose methyl galactoside, and wherein said medium further comprises an enzyme that converts said precursor to galactose.

Claim 86 (previously presented)

The process of claim 74, wherein said cells or tissue are incubated in a culture medium containing one or more galactose derivative selected from: galactose-1-phosphate and UDP-galactose.

Claim 87 (previously presented)

The process of claim 74, wherein said plant cells or tissue are tobacco, cotton, rape seed, potato, or maize plant cells or tissue.

Claim 88 (previously presented)

The process of claim 74, wherein said transforming further comprises transforming said cells or tissue with one or more heterologous nucleotide sequence of interest.

Application Serial No. 09/762,629
Amendment dated November 23, 2004
Reply to Final Office Action of December 22, 2003

Claim 89 (previously presented)

Transformed cells or tissue selected by the process of claim 74.

Claim 90 (previously presented)

A transformed plant comprising cells or tissue selected by the process of claim 74.

Claim 91 (New) A process for selecting transformed cells or tissue comprising:

- a) transforming plant cells in vitro or plant tissues in vitro are sensitive to galactose toxicity with a polynucleotide molecule encoding UDP-glucose-dependent uridyl transferase ;
- b) exposing the cells or tissue to galactose, wherein said galactose is toxic to non-transformed cells or tissue; and
- c) selecting transformed cells or tissue that are insensitive to galactose toxicity from a population of genetically nontransformed cells or tissue, wherein the galactose is toxic to the nontransformed cells.

Claim 92 (New) A process for selecting transformed cells or tissue comprising:

- a) transforming plant cells or plant tissues that are sensitive to galactose toxicity with a transformation vector comprising a polynucleotide encoding a heterologous promoter associated with a polynucleotide molecule encoding UDP-glucose-dependent uridyl transferase ;
- b) exposing the cells or tissue to galactose, wherein said galactose is toxic to non-transformed cells or tissue; and

Application Serial No. 09/762,629
Amendment dated November 23, 2004
Reply to Final Office Action of December 22, 2003

c) selecting transformed cells or tissue that are insensitive to galactose toxicity from a population of genetically nontransformed cells or tissue, wherein the galactose is toxic to the nontransformed cells.

Claim 93 (New) A process for selecting transformed cells or tissue comprising:

- a) transforming plant cells in vitro or plant tissues in vitro that are sensitive to galactose toxicity with a transformation vector comprising a polynucleotide encoding a heterologous promoter associated with a polynucleotide molecule encoding UDP-glucose-dependent uridyl transferase ;
- b) exposing the cells or tissue to galactose, wherein said galactose is toxic to non-transformed cells or tissue; and
- c) selecting transformed cells or tissue that are insensitive to galactose toxicity from a population of genetically nontransformed cells or tissue, wherein the galactose is toxic to the nontransformed cells.